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# The Role of Entrepreneurial Orientation in Developing SMEs Resilience Capabilities Throughout Covid-19

## Abstracts

*Through the lens of entrepreneurial orientation, this study investigates operational practices that (SMEs) have either adopted or improvised to support SMEs' resilience in the face of COVID-19. Qualitative data were collected through 43 semi-structured interviews with entrepreneurial resource providers, owners, and managers of several SMEs across different industrial sectors in Jordan. The study contributes to the further understanding of SMEs' resilience by conceptually advocating a five-pillars practitioner-grounded framework of SMEs' resilience capability (Efficiency-based Capability, Adaptive-Capability, Collaborative-Capability, Change-Capability, and Learning-Capability). Entrepreneurial orientation has been found to transition and mobilise SMEs' resilience to survive major disruptions and threats. Entrepreneurial orientation, in this study, grounded on risk-taking, innovation, and proactivity, facilitates developing new capabilities that shield the firm against different threats. Practically, the study suggests several recommendations for SMEs to meet the challenges of COVID-19 and similar future major shocks. Notably, the study suggests that SMEs should balance short-term operational actions with long-term strategic thinking to build a resilience capability pool.*

**Keywords:** Organisational Resilience; SMEs, Entrepreneurial Orientation, COVID-19; Resilience Capabilities

# 1 Introduction

The COVID-19 pandemic caused severe health and economic disruptions worldwide. Many logistics centres and delivery channels were subject to disruptions due to movement restrictions during the lockdown, leading to a shortage in supplying the necessary raw materials (Liu et al., 2020). Due to health risks, businesses had difficulty finding the labour required to maintain their usual production capacity. Demand also dropped significantly or moved to online channels accompanied restrictions on delivery routes, changes in purchasing patterns (Carlsson-Szlezak et al., 2020). Indeed, many businesses were taken aback by the scale and speed of the pandemic (Gereffi Islam et al., 2020<sup>1</sup>). However, many companies worldwide were able to adjust and return to work (Liu et al., 2020; Lee & Trimi, 2021). This has led to exponential increase in research on covid-19 resilience. Scholars use the term “resilience” to describe this ability to adjust and return to work in hostile environments (Kolade et al., 2020).

~~However, despite~~ Despite the advancement in the theoretical background and comprehensive conceptualisation of organisational resilience (Duchek, 2020), empirical and conceptual gaps remain. The empirical gap arises from the type of investigated organisations where few studies investigated organisational resilience in the context of small and medium-sized enterprises (SMEs) (Polyviou et al., 2019). This gap becomes salient at a time when SMEs are one of the worst affected sectors by COVID-19 due to their limited resources compared with large companies (Juergensen et al., 2020; Pedauga et al., 2021). They are less resilient to recover from crisis, and research on resilience seems to have mainly focused on large organisations (Polyviou et al., 2019).

According to Juergensen et al. (2020), throughout the disruption, some SMEs managed to stay resilient and innovate new approaches to survive and convert threats into opportunities. For example, some SMEs have resorted to the use of digital tools for seamless teleworking. Others

started to sell online and managed production processes remotely through the means of automation (Lee & Trimi, 2021). Other SMEs repurposed their operations to keep their task force in the market, explored untapped coping strategies, or accessed government financial aid and resources (Islam et al., 2021). Nevertheless, many SMEs struggled to cope, lagged behind their counterparts, or had to close down due to the inability to grasp this huge changes in the business environment (Juergensen et al., 2020; Pedauga et al., 2021). As such, we seek to unpack the practical attributes and capabilities of SMEs that made them resilient in the face of COVID-19.

The other research gap relates to the conceptualisation of SMEs' resilience. In precedence to Covid-19, there has been an emerging stream of research on SMEs resilience, which focused on two key areas (Korber & McNaughton, 2017): one on how firms responded to the crisis while during the upheaval (~~Herbane, 2015~~; Polyviou, Croxton, & Knemeyer, 2019) and the other on the bouncing back after the crisis has faded away (Herbane, 2019). As the current Covid-19 crisis continues to sweep the world's economies and societies by uncertainty and complexity, a new stream of research emerged that solely focused on "Covid-19 SMEs' resilience". This is mainly due to the vast scale of the crisis (both breadth and depth), making it dissimilar to other global shocks (e.g., financial crisis and terrorist attacks) in terms of its impact on the macro-level such as strained healthcare resources, shrinking economies, disrupted supply chains, and micro-level such as individual wellbeing, mental health issues and lost jobs. These troubles combined entailed the investigation of Covid-19 related SMEs' resilience in much more detail. Nevertheless, the early literature on SME resilience primarily focused on the challenges that SMEs faced during the pandemic (See, for example, Kuckertz et al., 2020; Liu, et al., 2020; Pedauga, et al., 2021; Stephens, et al., 2021). Other research attempted to explain key characteristics, structures, resources, and processes that SMEs have

developed (or need to develop) to realise resilience (See, for example, Grözinger et al., 2021; Haneberg, 2021; ~~Klein & Todesco, 2021~~; Prah & Sibiri, 2020; Thukral, 2021). Against this backdrop, our paper complements current research endeavours by providing a capability-based approach to SMEs' resilience. ~~T~~Through the lens of entrepreneurial orientation, and how entrepreneurial orientation contributed to the development/refinement of ~~dynamic~~ capabilities that SMEs relied on to develop their organisational resilience.

In doing so, we contribute to the organisational resilience literature and practice through an in-depth investigation of the following research questions: Q1. What capabilities are needed to empower SMEs' Organisational Resilience to meet the challenge of COVID-19?; and Q2. How entrepreneurial orientation contributes to SMEs' resilience? To answer these questions, semi-structured interviews were conducted with entrepreneurial resource providers, SMEs' owners, and managers in Jordan. As such, our paper contributes to SMEs' resilience literature in four ways. First, we bridged a gap in SME resilience literature by providing a deeper and broader understanding of the key challenges that faced SMEs and how these challenges have been mitigated. Second, our paper presents how entrepreneurial orientation assists in understanding and developing mitigation actions against the hurdles created by the pandemic. Third, we present how entrepreneurial orientation assisted SMEs in developing resilience-based capabilities and how it contributes to developing SMEs' resilience. Finally, practitioners can make sense of various challenges, mitigation actions, and resilient capabilities in SMEs and use them as a measure to compare with their current resilient capabilities.

In the following section literature is reviewed regarding organisational resilience, SMEs' resilience, and entrepreneurial orientation. This is followed by a background section on how Jordan has dealt with Covid-19 and how this has affected small businesses in Jordan. Then, the

methodological approach is outlined, followed by the presentation and discussion of findings. Finally, theoretical and practical contributions and research limitations are presented.

## **2 Literature Review**

### **2.1 Organisational Resilience**

In the management field, resilience refers to the organisation's ability to recover from a crisis (Duchek, 2020). In the same vein, Herbane (2019: 478) stated that “*Resilience is an adaptive process and capacity of an organisation to address major acute and strategic challenges.*” Organisation resilience allows adapting to a devastating threat in the short-term to stay in line with long-term needs. In this sense, resilience mandates that organisations build their capacity to overcome a current crisis and survive any threats (Abualqumboz et al., 2020).

Literature on SME's responses to major turbulences such as natural disasters shows a lack of organisational resilience. One obvious result of this situation is the heavy reliance of SMEs on government support through recovery packages and grants (Rank & Strenge, 2018). Corey & Deitch (2011), in their study on Hurricane Katrina's impact, argue that SMEs are the least capable organisations to recover from a disaster due to firm size. Conz & Magnani (2020) have recently conducted a systematic literature review on dynamic aspects of organisational resilience and proposed two main paths for resilience: absorptive resilience and adaptive resilience, as shown in Figure 1 below.

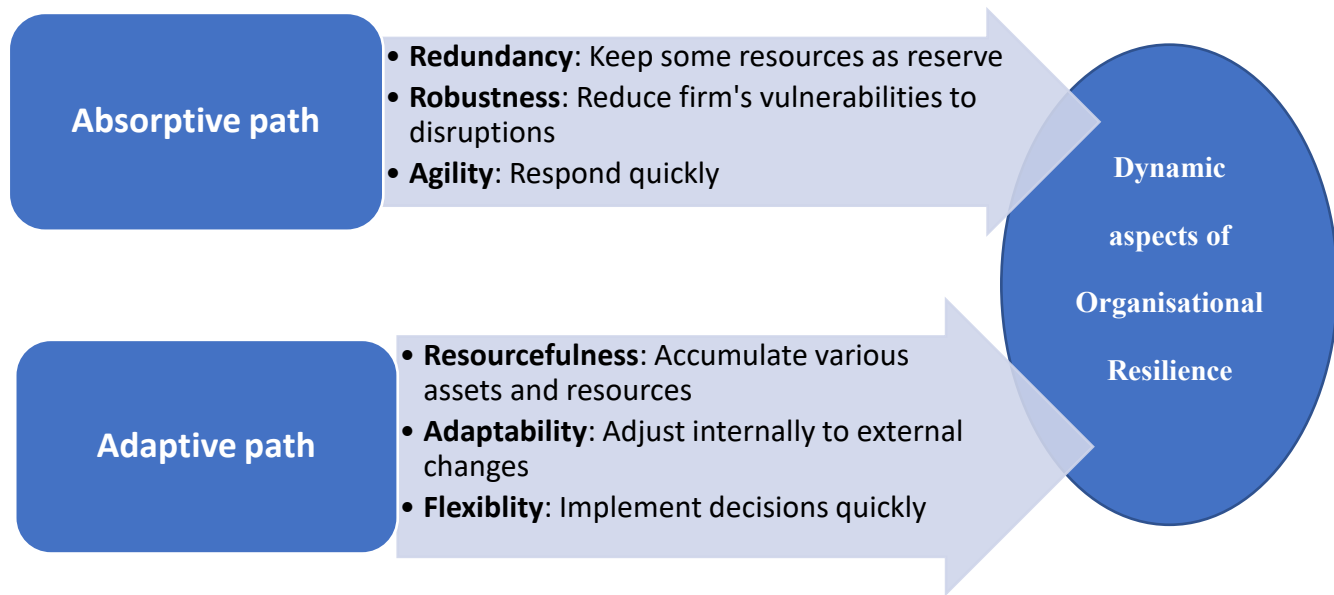


Figure 1: Dynamic organisational resilience (adapted from Conz & Magnani, 2020)

The dynamic framework of Conz & Magnani (2020) recognises the temporal conditioning of resilience dimensions and proposes vital capabilities needed for SMEs to be resilient in the face of grand challenges. However, research on how SMEs can develop such capabilities seems to be scarce (Conz & Magnani, 2020). Turning to capabilities, Pavlou & El Sawy (2011) propose a framework presenting four main capabilities ranging across a spectrum, starting from existing operational capabilities and ending at reconfigured operational capabilities, as illustrated in Figure 2.

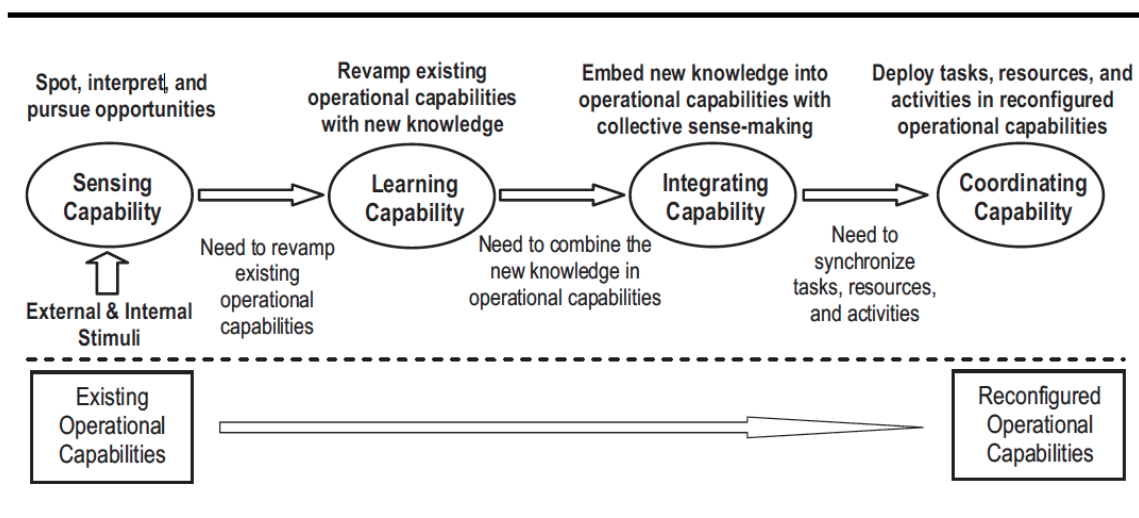


Figure 2: Dynamic Capabilities in Turbulent Environments (Pavlou & El Sawy, 2011)

Regarding the two frameworks of Conz & Magnani (2020) and Pavlou & El Sawy (2011), our paper highlights a gap in extant literature where organisational resilience has not been studied from a capability-based approach. This comes with the exception of some scholars (~~e.g., such as Ates & Bititei, 2011; Leonelli et al., 2019; and Iborra et al., 2020~~), who link the SMEs' ability to develop resilience capabilities to entrepreneurial orientation.

## **2.2 The Role of Entrepreneurial Orientation in SMEs' resilience**

Entrepreneurial orientation (EO) is the firm capability to explore innovative ideas, make sense of the future and act upon it, and thrive in uncertain environments relying on a mixture of decision making, strategising, managerial philosophies, and entrepreneurial behaviour (Rank & Streng, 2018; ~~Wales et al., 2020~~; Brouthers et al., 2015). Miller (1983) indicates that pioneering, innovation, risk-taking, willingness to experiment, competitive orientation, self-motivation, alignment-orientation, aggressiveness, experience exploration, and learning are the foremost determinants of entrepreneurial orientation. Lumpkin & Dess (1996) affirm the relationship between EO dimensions, including autonomy, proactiveness, risk-taking innovativeness, competitive aggressiveness, and organisational better performance. However, EO's research abundance emphasises three main dimensions: innovativeness, proactivity, and risk-taking (Rank & Streng, 2018; Verbano et al., 2020; Iborra et al., 2020). These dimensions tend to take two directions: one that takes the construct as a single multidimensional, where EO is a higher-order construct with three subsets that are dealt with as one bundle contributing towards firm-level economic performance (see, for example, Brouthers et al., 2015; Li et al., 2017; Verbano et al., 2020). The other direction deals with the three dimensions separately. As such, they can occur in various combinations that contribute to firm-level economic



performance (see, for example, Freixanet et al., 2020; Rank & Strenger, 2018; [Urban, 2019](#); ~~Urban & Willard, 2017~~).

Innovativeness is a cornerstone of the entrepreneurship pathway, as no entrepreneurial activity can succeed without a certain degree of innovation (Urban, 2019; Verbano et al., 2020). That is because innovation reveals the firm's willingness to engage in an entrepreneurial approach based on innovation, experimentation, and the introduction of new services or products (Freixanet et al., 2020). Innovation seeks solutions to solve problems. ~~Kraft & Bausch (2016) refer to innovation as the organisation's ability to think out of the box, leading to new ideas, concepts, and more efficient solutions.~~ As such, innovation begins by spotting a problem, challenge, or a gap in the market provision or customer orientation (~~Lassalle, 2018~~). Innovation can also be witnessed in the changes in a firm's operations and strategies, organisational routines, and leadership (Rank & Strenger, 2018). Turning now to emerging markets where high levels of uncertainty and scarcity of resources exist, innovation becomes significantly evident in investing in services and products that are at low cost and of good quality that can reach more segments of the society (Urban, 2019). Innovation also includes the investment in operational improvement (e.g., intelligent forecasting capabilities) that seeks to manage uncertainty and build resilient operations (Ramezani & Camarinha-Matos 2020).

Turning to proactivity as the second dimension of EO, it is defined as individuals taking initiatives to change rather than waiting for the change to happen (Hon et al., 2014). ~~Interestingly, from a control theory perspective, proactivity is seen as a conformity value. It seeks to bridge the gap between the current situation and a reference point in the present or the future (Kark et al., 2018).~~ Proactive behaviour, in business environments marked with dynamism and unpredictability, manifests itself in the ability of individuals to seize opportunities and neutralise threats or convert them into gains and draw multiple scenarios of

what the future might be (Urban, 2019; ~~Urban & Willard, 2017; Wales et al., 2020~~). Proactivity also seeks to improve firm capabilities, and innovative practices. It also seeks to tackle difficulties and threats (Rank & Strenge, 2018). ~~However, this requires an entrepreneurial spirit that can explore the future, has a bold awareness of business trends in the local and global markets, and build a broad network of relationships (Wales et al., 2020).~~

Finally, the risk-taking dimension of EO signposts the willingness of firms to take risks reflecting their decisions on allocating critical resources and scaling or developing new products or markets (Rank & Strenge, 2018). Although, businesses tend to reduce risks that face the firm, risk-taking behaviour is almost an inextricable feature of the entrepreneurial firm (Jones et al., 2019). In the same vein, the pursuit of opportunities is characterised by uncertainty, as firms may invest time, effort, and resources into an entrepreneurial idea before realising the benefits. With an abundance of literature on the impact of risk-taking and the likelihood of surviving the competition in developing or emerging markets (Freixanet et al., 2020; Urban, 2019; Brouthers et al., 2015), there is an increasing line of inquiry highlighting the impact of risks on entrepreneurs' psychological aspects in entrepreneurial firms. Other implications, such as high staff turnover and reputation damage of employees if their entrepreneurial ideas fail to achieve tangible returns, are also observed (Alabduljader & Alhijji, 2019). Together, these studies outline that risk-taking is an inherently innovative and entrepreneurial pursuit for new opportunities in competitive environments (Ahworegba et al., 2020).

To summarise, bringing together literature streams on organisational resilience and entrepreneurial orientation prompted to explore the challenges SMEs face, the capabilities they employed to face the challenges, and how entrepreneurial orientation made this employment feasible. EO is crucial for SMEs in facing-up dynamic environments (Asyari, 2021). However,

there is limited evidence reflecting how EO has been employed while SMEs developed the resilience capability to cope with events, such as the COVID-19 pandemic, and how EO contributes to SMEs' resilience. In addition, there is limited evidence of a holistic capability framework that highlights the details of such capabilities and how they are developed. We believe that SME resilience literature currently provides only a threshold to understanding the nature, extent, and consequences of EO-based SME capabilities. Consequently, there is still much to be learned about how the streams of organisational resilience and capabilities merge and evolve with entrepreneurial orientations in major disruptions.

### **3 COVID-19 in Jordan**

The COVID-19 has spread globally, creating severe health and economic disruptions worldwide. Some countries such as Jordan have imposed a complete national lockdown, with strict laws to limit the disease's spread. The Jordanian government has taken proactive measures and placed a strict plan to combat the epidemic, which first appeared in the country on March 2, 2020. On March 17, the Jordanian government activated the Defence Law, under which, all institutions, official departments, and the private sector were suspended except for vital health sectors. Citizens were prevented from leaving homes except in extreme necessities. These measures include complete closure of borders, land, sea, and air crossings except for a small number of commercial land traffic. Compulsory quarantine of those who show symptoms were implemented, closure of schools, universities, factories, companies, shops, and markets, and a complete cessation of all forms of social life. As the virus gradually receded in early May, the government began to ease the complete national lockdown. However, the Jordanian authorities maintained social distancing to contain the spread of the Covid-19; and many businesses remain entirely closed, such as gyms, wedding halls, restaurants, and many others. However, with the second wave, the Jordanian government has retightened restrictions and

social distancing measures. These measures have resulted in an economic recession in the whole country and caused unprecedented financial losses for most (SMEs) operating in the country.

In Jordan, SMEs constitute 99% of the companies operating, which are classified according to the number of employees. Small companies employ 19 employees or less, and medium companies employ 20 to 99 employees. These SMEs contribute to 35% of job opportunities and 45% of the volume of transformational exports ~~(Al-Hyari et al., 2011)~~. The SMEs in Jordan have suffered more, as these organisations were unprepared to meet such a challenge. A recent report by Mercy Corps (2020) in Jordan paints a bleak picture of the impact on SME's that includes disruption to supply chains, reduced trading, reduced cash flow, and massive investment required in technology. However, as the report concludes, the worst of the challenges is the high uncertainty, the future of trading, and new consumer preferences following the end of the pandemic (Mercy Corps, 2020).

## **4 Methodology**

### **4.1 Research Strategy**

Given the exploratory nature of this study, aiming at answering “How” and “Why” questions, a qualitative research strategy has been chosen. Qualitative methods support discovering and explaining the study's phenomenon and facilitate an in-depth analysis by aggregating the data into themes (Braun & Clarke, 2006) ~~(Manning et al., 2019)~~. It enables the sequential investigation allowing researchers to deal with research emerging avenues. Besides, it is more flexible, enabling unlocking research phenomena and discovering new issues.

Online semi-structured interviews were conducted due to the difficulty of face-to-face interviews during the first lockdown in Jordan (during which this study was conducted). The

semi-structured interview is when the interviewer deploys a mixed strategy, alternating structured and spontaneous data quest. A semi-structured interview is a data collection method that significantly develops new knowledge or updates current knowledge on a particular research area (Lincoln, 1995). The semi-structured interview is more flexible because the structured part permits collecting specific answers and responses for the study questions. The unstructured part empowers an in-depth understanding of untapped areas of the studied phenomenon.

An interview protocol was developed to engage with the research questions, which were informed by (Pavlou & El Sawy 2011; Herbane, 2019). Inquiring about the main challenges that SMEs are facing ~~or will face~~ under the Covid-19 outbreak and how these SMEs can overcome such challenges has been developed. This interview protocol comprised three main sections in which a set of particular questions were asked in each section. The first section included questions about the interviewee's general information such as job position/title, name, years of experience, contact information. The second section had general questions about the company, such as the number of employees, annual revenues, primary services, services facilities, and contact information. The third section included specific questions about companies' operations, capabilities, and responses to the pandemic challenges.

## 4.2 Data Collection

The empirical data were collected from different SMEs in Jordan. ~~Nevertheless, the study findings can be extrapolated to SMEs in other countries.~~ Based on convenience and snowball sampling techniques (Spigel, 2017), a total of 43 online interviews were conducted across different SMEs ~~in Jordan~~. Participants ~~were chosen who are~~were SMEs' founders, managers, or resource providers and were involved in shaping SMEs' resilience in Jordan to understand the challenges they faced and their resilient capabilities to meet the challenges. The selected SMEs represent five different industrial sectors: food, IT services, Plastic, Fashion, Machinery,

and Cosmetics. The 43 interviews are detailed in Table (1) below which describes the role of the interviewees and their and company profiles~~were divided into the following: 5 interviews with entrepreneurial resource providers (i.e., consultancy services advisor who provides financial, legal advisory); 21 interviews with managers and CEOs; and 17 interviews with founding owners.~~ All participants have more than eight years of work experience. ~~Table (1) below describes the features of the respondents (interviewees) and company profiles.~~

Table 1: Interviewees' profiles

Position	No. of interviews	Company size (Number of employees)		Industrial sector					
		Less than 50	Medium 50-250	Food	IT services	Plastic	Fashion	Machinery	Cosmetics
Entrepreneurial resource providers (2 policy advisors and 3 financial analysts at an investment bank) (ERP)	5	2	3	x	x	x	x	x	x
General Manager/CEO of SMEs (CEO)	21	8	13	x	x		x		
Founding Owners of SMEs (FO)	17	5	12			x	x	x	x
<b>Total interviews</b>	<b>43</b>	<b>15</b>	<b>28</b>						

We used Zoom, Skype, and MS Teams to conduct the interviews. All interviews were recorded and transcribed into Arabic first, then translated into English. Interviews averaged an hour-long while the total duration of interviews was ~~48~~3 hours.

### 4.3 Analysis Process

The framework of a thematic analysis of Braun & Clarke (2006) has been adopted to analyse the collected data. The data analysis started by referring to fundamentals inferred from the

resilience literature to build an initial analytical interest point. Then, the data preparation involved data familiarisation by reading all the responses several times and checking the data quality. The process of data analysis went through question-by-question until all responses were grouped and organised. Preliminary notes and initial codes were created. These initial codes were organised to recognise patterns and develop the main themes. These themes were reviewed to examine the relationships between them to build core categories. The main themes and core categories were revised to establish greater combined or extendable levels.

To establish the credibility, the analysis process was conducted in two main stages. In the first stage, the analysis was performed in parallel, in which each author analysed the data separately to reduce the bias. In the second stage, the authors went back and forth in the analysis sequentially to filter the results until the level of saturation has reached.

## 5 Findings

### 5.1 COVID-19 challenges and recommended remedial actions

Understanding the COVID-19 challenges for SMEs helps better understand the required resilience capabilities to face the current pandemic. In Jordan, SMEs have witnessed a significant disruption into their operations system and experienced underperformance in their commercial activity during the COVID-19 crisis, with noteworthy changes in customers' demand and behaviour. ~~The major problem facing SMEs in Jordan is the low utilisation of production capacity. This problem is twofold: demand side and supply side—the COVID depressed demand for most goods and services. SMEs have witnessed significant disruption in their operations system and experienced underperformance in their commercial activity during the COVID-19 crisis, with noteworthy changes in customers' demand and behaviour. For example, the interviewee CEO1 highlighted that: “The demand decreased for many products and increased for many others. Some essential products are no longer essential, and many~~

*others have become essential with a clear change in purchasing behaviour and consumer demand.”*

*Logistics disruptions and raw material shortages were also fundamental problems that prevented SMEs from reopening. This forms a significant challenge to SMEs. For instance, the interviewee ERP1 stressed that: “due to lockdown, we struggled with having the required raw materials as our local suppliers were working with half of their capacity. Therefore, we failed to fulfil many of our orders. Also, customers prefer longer expiry date products as they tend to purchase in order to store.” Besides, SMEs tend to be labour intensive and could not resume their work as employees could not promptly return to their work. According to the interviewee ERP2, “Travel restrictions and the health impact of the Covid-19 have led to the limited availability of workers”.*

*Moreover, the findings reveal that SMEs also have to maintain a strict working capital discipline, particularly in collecting receivables and robust inventory management. Besides, SMEs need to intervene and innovate to reduce the working capital cycle proactively. CEO2 stated that: “We have to assess our operational and financial risks... We need to monitor the escalation of costs and the impact on the overall production margins”. Moreover, from our analysis, we found that SMEs that were more successful in facing the pandemic are those that monitor their internal vulnerabilities and the pressures that could affect their customers and suppliers. The interviewee FO4 clarified, “despite many challenges we faced during the pandemic, our internal operations designed to predict, follow and deal with our internal weakness in collaboration with our key suppliers and customers.”*

*Finally, SMEs were aware of the consequences of breaching restrictive agreements and liabilities with banks and other financial institutions, which may affect these small organisations’ ability to stabilise or continue. We also found that SMEs that survived the current calamity were those that proactively developed a financial plan with multiple scenarios*



~~considering the potential impact of each scenario on the organisational performance and for how long this impact could continue. For instance, the interviewee, FO8, stated that: “our ability to pay the loan settlements and interest affected during the lockdown in which our sales decreased by almost 50%. Thanks to the financial strategy we follow, as we have a strategy that focuses on not having liabilities more than 30% of our liquidity”.~~

~~Nevertheless, lack of financial resources required a timely, transparent, and clear communication system to gain the required supports from different stakeholders. For instance, the interviewee FO15 stressed: “the importance of social networking sites in recognising government support and how to obtain it to confront Coronavirus.”. In this regard, the interviewee FO7 also confirmed that: “Sometimes knowing the suffering of others eases your suffering. We are all trying to band together to confront this devastating pandemic”.~~

Table 2 shows the five critical challenges for SMEs’ decision-makers in Jordan that resulted from discussions with interviewees, discussions between the research team, and emergent themes from patterns across the transcripts. These actions were categorised to reflect the three SMEs’ EO: Innovativeness, Proactiveness, and Risk-taking.

Table 2: Key entrepreneurial challenges faced by Jordanian SMEs to recover from COVID-19

COVID-19 Entrepreneurial Challenges	Mitigating Actions	EO	Representative Quotes
Prioritise personal safety and continued engagement	Reorganise teams and reallocate resources	Innovativeness	“Ensuring the safety and wellbeing of employees in the workplace is essential. People seek guidance from their employers, the community, and government leaders. Addressing their concerns openly and transparently will go a long way in involving them and ensuring business continuity <b>[proactive orientation]</b> . We had to innovate new ways of working, including working from home, reorganise, and restructuring the team to help ensure the most vulnerable are protected in the first place <b>[innovative orientation]</b> .” Interviewee_FO13
	Exploring new policies supporting safe workplaces	Innovativeness	
	Initiate or expand flexible working arrangements	Proactiveness	
	Communicate with government health authorities	Proactiveness	
Reshape business continuity strategy	Determine how the crisis affects budgets and business plans	Proactiveness	“We have been proactive in our decision-making to preserve the continuity of business activities and increase the resilience of operations in the face of this pandemic <b>[proactive orientation]</b> . Our resilience strategy mainly includes assessing financial and operational risks and respond quickly <b>[proactive orientation]</b> , finding ways to reimagine a business environment <b>[risk-taking orientation]</b> that minimises disruption to the organisation requires a delicate balance between so many elements <b>[risk-taking orientation]</b> .” Interviewee CEO18
	Assess short-term liquidity	Proactiveness	
	Assess financial and operational risks and respond quickly	Proactiveness	
	Consider supply chain options	Risk-taking	
	Restructure teams/departments	Risk-taking	
Communicate with relevant stakeholders	Keep customers informed	Proactiveness	“In times of crisis, employees need reassurance about the security of their jobs <b>[proactive orientation]</b> . Customers crave certainty about the existence of the goods and services they have purchased; suppliers want to know when or if they will be paid, and the prospect of future orders and investors, of course, are closely monitoring the firm’s financial indicators and concerned about their investments <b>[innovative orientation]</b> ”. Interviewee_ERP5
	Maintain seamless and innovative communication channels.	Innovativeness	
	Consult with relevant business networks	Proactiveness	
Maximise the use of government support policies	Identify government support avenues	Proactiveness	“Without government support, I cannot see how we would have survived the crisis. It is crucial to try and find sources of government support that saves business now but sustain it in the future <b>[proactive orientation]</b> ”. Interviewee_FO3
	Apply for suitable government support	Proactiveness	
Build resilience capability for the new normal	Observe changes to the business environment	Proactiveness	“As soon as the economy recovers, SMEs will be subject to strategic changes in terms of organisation, location, procedures, new services, and products, which will be the new normal for them. Therefore, SMEs have to learn from their mistakes <b>[proactive orientation]</b> and develop a resilience capability <b>[innovative orientation]</b> , including one related to business continuity <b>[proactive orientation]</b> , which needs to be continuously updated.” Interviewee CEO21
	Develop and apply solutions	Innovativeness	
	Adopt “Continuous Improvement” approaches	Proactiveness	

*Bold text in brackets is author-emphasised while analysing data to signpost the type of entrepreneurial orientation that interviewees were referring to.*

~~Table 2 shows the five critical challenges for SMEs' decision makers in Jordan that resulted from discussions with interviewees, discussions between the research team, and emergent themes from patterns across the transcripts. These actions were categorised to reflect the three SMEs' EO: Innovativeness, Proactiveness, and Risk-taking.~~

The first challenge is how to “prioritise personal safety and continued engagement.” To assist in making the decision of prioritisation, the deliberate discussion and analysis suggested four actions, two of which, namely “reorganise teams and reallocate resources” and “exploring new policies supporting safe workplaces,” are related to innovativeness, while the other two “initiate or expand flexible working arrangements” and “communicate with government health authorities” are related to proactiveness. SMEs' quick response to lockdown measures focused initially on keeping close contact with staff and customers. The SMEs’ use of technology to innovate was visible. Some SMEs used MS Teams software to communicate and manage their workflow. Some others used Kanban board and flow management software such as Trello and ProofHub, which SMEs relied on to reorganise teams, store documents, and manage projects. Some interviewees hinted that proactiveness was the key in facing this challenge due to the immense importance of their personnel and customers health and wellbeing.

The second challenge is “reshape business continuity strategy,” and interviewees suggested several practical actions. The data analysis grouped these suggestions into five proactive and effective actions; (1) determine how the crisis affects budgets and business plans, (2) assess short-term liquidity, and (3) assess financial and operational risks and respond quickly. Meanwhile, the other actions: (4) “consider supply chain options (e.g., repurposing)” and (5) “restructure

teams/departments” are related to risk-taking. Some SMEs have realised that the pandemic may stay for long, and consequently, SMEs started to reimagine their businesses in the medium-term (1-3 years) and long-term financial and operational planning. SMEs started to renegotiate contracts with suppliers, engage key customers in discussions about the future of their relationships, and reassess risks in a world that may live longer with the pandemic.

The third challenge is how to “communicate with relevant stakeholders.” This challenge has been managed through three actions, two of which are: (1) keep customers informed, and (2) consult with relevant business networks are related to proactiveness, while the action “maintain open communication channels” is related to innovativeness. This challenge is related to all other challenges. SMEs proactively engaged their staff and customers with updates on the pandemic evolving status, government regulations, business strategic re-directions, etc. As suggested in the first challenge, SMEs relied heavily on technology to compensate for the lockdown and social distancing rules.

The fourth challenge is how to “maximise the use of government support policies”. This challenge is linked to two proactive actions, namely “identify government support avenues” and “apply for suitable government support.” The Jordanian government provided support to SMEs through different channels. One key criterion for SMEs to apply is to show how they can manufacture medical, safety, and essential food supplies. However, many SMEs reported in the interview that they could not show how they fit with the criteria, while others were not aware of such funding channels. As such, SMEs who acted proactively and discussed funding options with government bodies managed to get funding to assist in economic and operational recovery.

The fifth challenge is to “build resilience capability for the new normal.” This challenge is linked to three actions. The first was to proactively “observe changes to the business environment” and assess the disruptions/changes to supply chains and changes to customer preferences, amongst many other changes. This entails innovating a second action, “develop and apply solutions,” which would require SMEs to explore opportunities in responding to community needs during the pandemic. Finally, SMEs’ proactive actions include “adopt Continuous Improvement approaches” that engage SMEs with their stakeholders to continuously revise their strategies and actions to secure resilient business growth despite the mounting hurdles due to the pandemic.

## 5.2 What capabilities are needed to empower SMEs’ Organisational Resilience COVID-19?

Based on the data analysis, we argue that resilience suggests that SMEs should have reactive and proactive capabilities. The analysis of the interviews illustrates how SMEs could develop several capabilities to be more resilient. These capabilities are classified into five categories, as shown in table (3) below:

*Table 3: Representative quotes to support the five capabilities for SME Resilience*

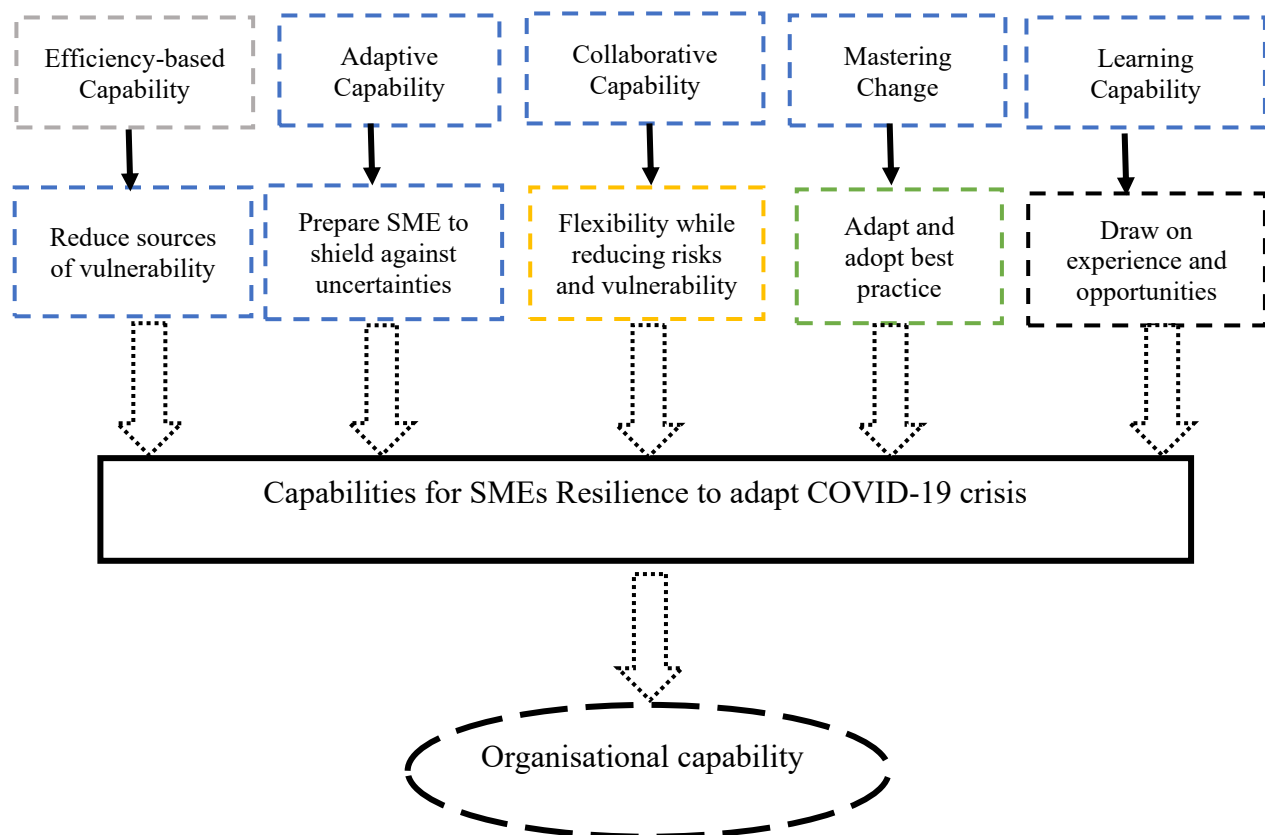
Capabilities Main Theme	Pattern Sub-theme	Some of the Participants' Quotes
Efficiency-based Capability	Reduce sources of vulnerability	<p>“Reducing sources of vulnerability involves real reflection on all of the company's activities and management decisions. For example, it is not reasonable to rely on a single supplier [<b>innovative orientation</b>] in a country with a volatile political regime.” Interviewee_CEO7</p> <p>“We were able to switch between suppliers for most of our raw materials and components [<b>risk-taking orientation</b>]. This has increased our Efficiency Capability during the pandemic and at the same time reduced the risk of being vulnerable”. Interviewee_ERP2</p>

Capabilities Main Theme	Pattern Sub-theme	Some of the Participants' Quotes
		<i>"To reduce the sources of vulnerability, we switched to local suppliers while international suppliers were not able to deliver on time [proactive orientation]." Interviewee_FO15</i>
<b>Adaptive Capability</b>	Prepare SME to shield against uncertainties	<p><i>"To prepare the organisation for meeting uncertainty, our supply chain management strives to prepare the organisation to face change. No question of wasting time thinking about disruption, a straightforward procedure understood by all must allow immediate action to be taken [proactive orientation]. This action involves adopting a flexible organisational structure and requires close collaboration between the different departments [innovative orientation]". Interviewee_FO1</i></p> <p><i>"Coronavirus pandemic not only has changed our life, but it also has reshaped our adaptive capabilities in the way we do business., we must be preparing ourselves for uncertainties [risk-taking orientation]" Interviewee_ERP1</i></p> <p><i>"Quick responsiveness, for instance, to unforeseen supply chain disruption is a shield against uncertainties [proactive orientation]". Interviewee_CEO4</i></p>
<b>Collaborative Capability</b>	Flexibility while reducing risks and vulnerability	<p><i>"Integration and optimisation efforts have enabled us to improve our flexibility level while reducing risks and vulnerability [innovative orientation]" Interviewee_CEO6</i></p> <p><i>"Learning how to work together and with others is becoming imperative [proactive orientation]" Interviewee_ERP4</i></p> <p><i>"We were very lucky in our company that we collaborate with our partners to avoid production shutdown [proactive orientation]. Such collaboration has reduced the risk of being vulnerable and increased our production flexibility" Interviewee_FO5</i></p>
<b>Mastering Change Capability</b>	Adapt and Adopt best practice	<p><i>"We are keen to adopt excellent habits continually and best practices to bring continues improvement and development of organisational skills and capabilities [risk-taking orientation]" Interviewee_ERP2</i></p> <p><i>"We have to execute change causing minimal negative impacts on people and operations [risk-taking orientation]" Interviewee_FO10</i></p> <p><i>"To be resilient organisation, I think it is to implement organisational change to adapt to current and future situation [innovative orientation]. This one of the important capabilities that we work on at our company". Interviewee_CEO11</i></p>
<b>Learning Capability</b>	Draw on experience and opportunities	<p><i>"The learning approach allows us to take advantage of experience and seize opportunities to thrive in today's dynamic and interconnected world [proactive orientation]" Interviewee_CEO17</i></p> <p><i>"Learning from lessons such as the covid-19 pandemic, that affected our business, should enhance our experience [proactive orientation]so that we can better exploit new business opportunities". Interviewee_FO14</i></p> <p><i>"Our learning approach is built on continuous observation of changes in the market [innovative orientation], and how supply and demand are affected</i></p>

Capabilities Main Theme	Pattern Sub-theme	Some of the Participants' Quotes
		during the pandemic and how competitors are responding to uncertainties <b>[proactive orientation]</b> . Coronavirus pandemic is a great example to learn from". Interviewee_ERP3

*N.B: Bold text in brackets is author-emphasised during the data analysis phase to signpost the type of entrepreneurial orientation interviewees referred to.*

Based on the analysis shown in Table 3, Figure (3) depicts these capabilities that SMEs have developed to cope with the COVID-19, which can help in similar crises. Such capabilities are crucial for improved firm performance even in normal economic conditions as they will strengthen entrepreneurial resilience in similar crises.



*Figure 3: Capabilities to cope with COVID-19 in SME's*

### 5.3 How entrepreneurial orientation contributes to SMEs' resilience?

The data analysis finds that surviving the pandemic requires SMEs to search for innovative solutions to manage the current epidemic and move the business to the desired future, which will become the new normal that may last for several years. The study participants affirm that EO plays an essential role in SMEs' resilience. For example, the interviewee FO11 addressed that, *“The tendency and willingness of our company to support new ideas, novelty, creativity, experimentation in introducing new products, services, and creative processes that are useful to predict the nature of a company's success and prosper.”* Moreover, the interviewee CEO5 argued that: *“one or more people can carry out these actions within our company.”*

The study finds that SMEs' resilience is an outcome of short-term and long-term strategic thinking and risk-taking. The EO increases self-confidence and demonstrates high levels of tolerance for ambiguity, and adapts quickly to change. It leads to bold strategies regardless of resource limitations. According to the interviewee FO2,

*“In the current environment, uncertainty appears, and to that, companies react by operating in the short-term. They tend to do what has always been good for them and gives them security. However, it seems contradictory. At this time, we must think about the long-term. The temporal dimension of the long-term increases the perspective of our vision and allows us to rationalise the day to day in its proper measure”.*

The respondents also emphasised the role of proactiveness in building organisational resilience capability. For instance, the interviewee ERP3 stressed that: *“proactivity in terms of anticipatory, change-oriented and self-initiated behaviour offers us a high tolerance of ambiguity, a high level of ability to adapt to various situations, and inviting rather than resisting change.”*



According to the data analysis, the EO can be considered a firm-level strategy-making process of SMEs' resilience. This resilience is implemented as a strategy to ensure SMEs can survive in the short-term and sustain their competitiveness in the long-term. This implementation requires looking into the post-crisis challenges and balancing the short-term operational actions with long-term strategic thinking to improve SMEs' resilience through continuous improvement of operations in a sustainable way and taking corrective actions whenever required.

The data analysis finds that the entrepreneurial orientation modifies the organisational status-quo and improves SMEs Resilience. It facilitates building and developing new capabilities by connecting the company with the external environment and acquiring new and relevant knowledge.

## **6 Discussion of findings**

In this paper, we respond to the recent calls to revisit organisational resilience literature in SMEs (e.g., Conz and Magnani, 2020). In today's volatile and hostile environment, SMEs are confronted with survival challenges. In order to survive, they must develop the capacity to recover quickly from difficulties and return to work. Previous contributions to SMEs resilience have emerged in two research areas; the first research area concentrates on the challenges facing SMEs during the pandemic (See, for example, Kuckertz et al., 2020; Liu, et al., 2020; Pedauga, et al., , 2021; Stephens, Cunningham, & Kabir, 2021). The second research area concentrates on the key characteristics, structures, resources, and processes that SMEs have developed to achieve SME resilience (See, for example, Grözinger, et al., 2021; Haneberg, 2021; ~~Klein & Todeseo, 2021~~; Prah & Sibiri, 2020; Thukral, 2021).

Grounded in dynamic organisational resilience literature and by focusing on entrepreneurial orientation as a theoretical means to analyse SMEs' capabilities (Conz and Magnani, 2020), this paper provides a portfolio of capabilities that SMEs have either used or developed throughout the pandemic to overcome the challenges of complexity, uncertainty, and disruptions to supply chains. The entrepreneurial orientation lens underpins the analysis of SMEs' capabilities and helps understand how such capabilities can be developed.

Table 2 provides a basic representational concept of entrepreneurial challenges, actions, and mechanism SMEs utilised in an institutionally weak business environment. In the same inquiry line, the three entrepreneurial orientations (innovativeness, proactivity, and risk-taking) contributed to better explain how such actions and mechanisms that SMEs have developed brought in resilience despite the surrounding institutional weaknesses. We also examined the pandemic's impact on SMEs in Jordan, which is a relatively under-represented context in the study of SMEs in general (e.g., Kolade et al., 2020). As such, our portfolio of capabilities (Figure 3) contributes to the literature on organisational resilience that primarily focused on large organisations.

Developing organisational resilience enables firms to recover from disruptions by either returning to a normal situation or improving performance in a new normal world (Conz and Magnani, 2020). Towards that end, we found that entrepreneurial orientation supports SMEs' resilience by facilitating the development of five entrepreneurial capabilities: efficiency-based capability, adaptive capability, collaborative capability, mastering change, and learning capability. We propose that these capabilities reduce the sources of vulnerabilities and shield SMEs with preparedness and adaptation in the face of major disruptions. Our findings have convergence and

divergences with literature in several ways. The literature argues that SMEs orientated towards proactivity may not necessarily correspond with resilience in the face of major disruptions (cf. Kolade et al., 2020; Juergensen et al., 2021; Islam et al., 2021). However, our findings reveal that in this current pandemic, Jordanian SMEs have seen proactivity as a means to improvise new organisational practices that disrupted the established organisational routines.

Given the process aspect of proactivity, attitudes about the decision-making process that SMEs had to “master” – especially in the early days of the first national lockdown – took a relative prevention approach to minimise disruption to their task-force due to contracting the virus (Corey and Deitch 2011). While this made SMEs relatively more reliant on government guidance, the risk-taking orientation manifested itself to afford agility and alignment with market dynamics. This was evident in some SMEs that decided to internally restructure their operations to optimise resource while meeting their customers’ pressing needs. Having said that, some SMEs have sought a new entrepreneurial direction in this pandemic in which they have discovered opportunities that delivered better value within their ecosystem.

Our findings revealed that SMEs continuously engaged in scanning and assessing the business environment to prioritise critical aspects in their quest for resilience (Hendry et al., 2019). The disruption brought forward a research context in which case-established research on SME resilience proved lacking since the plethora of literature has focused either on stable business environments or less risky business shocks. The pandemic sparked a perfect storm to rethink and explore how SMEs would respond to major shocks like this current pandemic (Asyari, 2021). Concerning that, our paper sought to understand how major shocks affected SMEs in Jordan.

SMEs that successfully survived throughout the pandemic entailed that they have redefined the broad and achievable short-term goals (cf. Pedauga et al., 2021). Furthermore, they have developed a results-based resilience strategy by distributing activities across the ecosystem, all aimed at building networks efficiently and effectively, which allowed for leveraging their distribution networks.

The accumulation of knowledge and experience about market dynamics and different behaviours throughout the pandemic has turned on an interventionist approach, in which case, SMEs started to innovate solutions and communication channels with their customer base (Abualqumboz et al., 2020). Our findings revealed that most SMEs developed a robust risk management process and adopted diversification strategies that are responsive to shifts in customer preferences, such as transforming the supply chain from end consumers to farthest tier suppliers (Ahworegba et al., 2020; Duchek, 2020). With this in mind, SMEs have also defined a method for assessing the risk associated with each action or strategy or on any channel in the supply chain and with each warehouse, factory, supplier, or mode of transport. We agree that larger organisations may have been seen as more resilient than their smaller counterparts due to their substantial supply chains and infrastructure (Hendry et al., 2019), but our findings reveal that there has been a remarkable shift in the Jordanian SMEs attitude to growth and strategy. In risk-taking behaviour, some SMEs diversified their product/service range, enriched their selling channels, and innovated logistical solutions that reached their customers who were heavily hit (e.g., shielding individuals). This comes in line with the findings of Iborra et al. (2020), except that in Iborra's (2020) study, the research focused on the aftermath of 2008's financial crisis.

## 7 Conclusion

This study presents theoretical and empirical contributions towards understanding the organisational resilience in Jordanian SMEs following major shocks, such as Covid-19, through the lens of entrepreneurial orientation.

During the Covid-19 pandemic, the early literature on SME resilience primarily focused on the challenges that SMEs faced during the pandemic (See, for example, Kuckertz et al., 2020; Liu, et al., 2020; Pedauga, et al., , 2021; Stephens, Cunningham, & Kabir, 2021). This has been followed by a new stream of research that focused on bouncing back/recovery strategies (See, for example, Grözinger, et al., 2021; Haneberg, 2021; ~~Klein & Todeseo, 2021~~; Prah & Sibiri, 2020; Thukral, 2021). However, with the plausibility of such efforts, a key gap remains: how SMEs managed to utilise firm characteristics, structures, resources, opportunities, and processes to become resilient.

To our knowledge, none of the recent research efforts has explained or provided the required capabilities that SMEs have developed (or need to develop) to be resilient. This leaves a gap in theory that ~~this paper seeks to needs to be~~ bridged. It also leaves a gap in practice as SMEs will need to absorb how to develop, utilise or adopt such resilient recovery strategies. Against this backdrop, our paper complements current research endeavours (e.g. Herbane, 2019) by providing a capability-based approach to resilience that unpacks the bouncing back/recovery strategies that Jordanian SMEs have adopted or ventured throughout the current pandemic. We do this by conceptualising capability-based resilience through the lens of entrepreneurial orientation.

As such, we make an incremental contribution to knowledge by spotting a neglected area in the literature that seems to have previously focused on organisational resilience but with less concern on how the entrepreneurial orientations of SMEs manifest themselves in developing their

capabilities to absorb and recover from major shocks. Therefore, our paper addressed the two research questions as follows:

***Q1. What capabilities are needed to empower SME's Organisational Resilience to meet the challenge of Covid-19?;***

Through studying Jordanian SMEs and the capabilities, they have had or gained throughout the pandemic; our study showed five entrepreneurial challenges that contribute to our understanding of entrepreneurial orientations in turbulent times. These challenges are: (1) prioritise personal safety, and continued engagement, (2) maximise the use of government support policies, (3) communicate with relevant stakeholders, (4) reshape business continuity strategy, and (5) build resilience for the new normal. The entrepreneurial challenges emerged as a result of the need to respond to the pandemic. Our study presented five capabilities that SMEs developed or refined to adapt to the changes following the pandemic. These capabilities are Efficiency-based Capability, Adaptive Capability, Collaborative Capability, Mastering Change Capability, Learning Capability. Although these capabilities emerged from the Jordanian context, they can be applied to other SME's in other countries. The findings suggest that SMEs should crucially utilise their pool of capabilities to exploit external knowledge and build their dynamic capabilities to support their resilience strategy (Hendry et al.,2019).

Our study, therefore, makes four contributions. First, we contribute to the literature on SME resilience by providing a deeper and broader understanding of key challenges that SMEs had to deal with during the pandemic in Jordan and what actions SMEs used to face such challenges. The literature has presented some challenges faced by SMEs in turbulent times, but our study, by

utilising an entrepreneurial orientation approach, offers a prescriptive set of mitigating actions to meet these challenges in the Jordanian context. In addition, by detailing the three dimensions of entrepreneurial orientation in the mitigating actions adopted by SMEs, our second contribution is to inform entrepreneurial orientation researchers on the differential influence of the three sub-dimensions of entrepreneurial orientation that has been utilised in this study on the types of actions are most useful to meet with the challenges that the Jordanian SMEs have faced.

### ***Q2. How entrepreneurial orientation contributes to SMEs' resilience?***

Our third contribution manifests itself through the unpacking of dynamic capabilities that assisted SMEs in facing the challenges and eventually cemented their organisational resilience. The five capabilities provide a broader understanding of how entrepreneurial orientation is crucial in facing major shocks such as Covid-19. We recognise the literature voiced the importance of entrepreneurial orientation in SME resilience, but this has been limited in its breadth and depth, especially concerning Covid-19. Therefore, we propose that the prevalence of multiple entrepreneurial orientations in SME capabilities evidences organisational resilience that positively engages SMEs with major disruptions.

The study further explains how SMEs exploit their internal capabilities to overcome the challenges of COVID-19 by being agile in responding quickly to customer demand, adaptable by having the necessary skills to adapt to the environment, and aligning employees' goals with their firm goals. Our study proposes that entrepreneurial orientation has a significant impact on the SMEs' strategic, operational practices and decisions, and as such, they contribute the most to SMEs' resilience. Our proposal is further corroborated by our findings that entrepreneurial orientation is translated into

better results, especially when accompanied by innovation, risk-taking, and proactivity, facilitating the adaptation to the dynamic environment. Entrepreneurial orientation also mandates new configurations and activities to provide greater flexibility facilitating reactive and proactive responses to the pandemic-driven changes. The fourth contribution is to inform the practice of the two frameworks of entrepreneurial challenges and capabilities for developing a resilient SME in turbulent times. For example, SME managers can contextualise the two frameworks to explore a resilience strategy that fits their resources and strategic position. By developing dynamic capabilities around entrepreneurial orientations, SME staff will be better prepared to address similar major disruptions.

Finally, the study has several limitations that open opportunities for future studies. This study collected cross-sectional data, which limited the views of the respondents to the current situation. Thus, future studies could be based on longitudinal data to capture the development of respondents' perspectives over time. This study has focused on how SMEs in Jordan survived the pandemic and the capabilities they developed that have made them successful in the face of Covid-19 disruptions. Future studies could focus on why other SMEs could not survive the pandemic by exploring contextual factors that inhibited their entrepreneurial orientation. For example, it would be helpful to study the long-term impact of the pandemic on SMEs and how capabilities that assisted in survival and growth in the short term are different from those required or adopted in the long term.

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